

REMARKS

An RCE application accompanies this submission, so entry and earnest consideration of the foregoing amendments are respectfully requested. Claims 25-29, 31-34, 36, 37, 41-45, 47-50, 52, 53, 63 and 64 remain pending.

Discussion of Rejections under U.S.C. 103(a)

The Final Office Action rejected claims 25, 26, 28, 29, 34, 36, 37, and 63 under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri*. The Office Action also rejected claim 27 under rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and further in view of *Long*. Claim 31 stands rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and further in view of *Juskey*. Claims 32 and 33 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and further in view of *Primeaux*. Claims 41, 42, 44, 45, 50, 52, 53 and 64 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and *Lee et al.* Claim 43 stands rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and *Lee et al.* and further in view of *Long*. Claim 47 stands rejected under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and in view of *Lee et al.* and further in view of *Juskey et al.* Finally, the Office Action rejected claims 48 and 49 under 35 U.S.C. 103(a) as allegedly unpatentable over *McLellan* in view of *Khatri* and in view of *Lee et al.* and further in view of *Primeaux*. Applicant respectfully traverses the rejections.

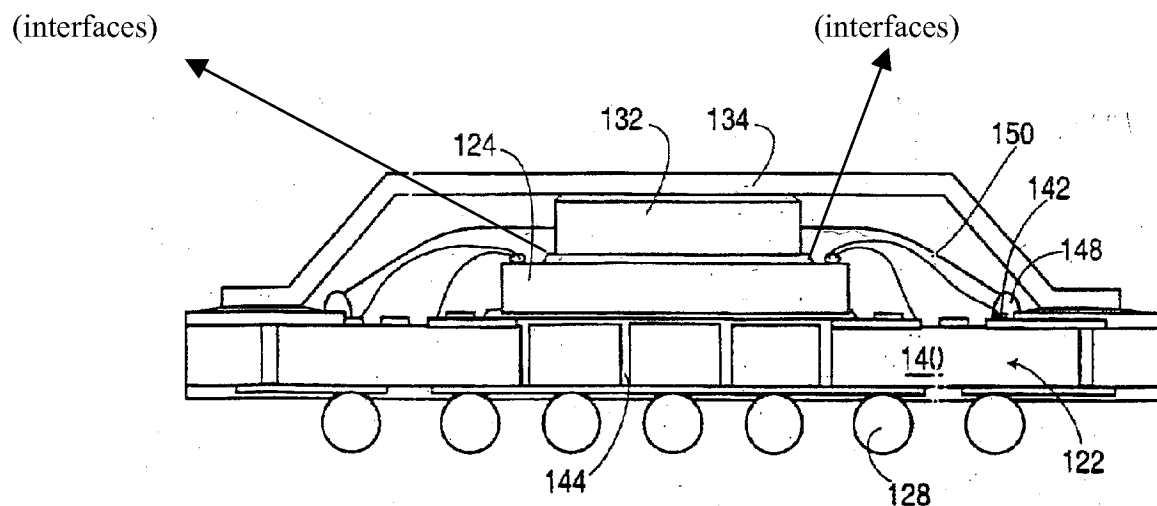
Applicant has amended independent claims 25 and 41 to more clearly define a novel and non-obvious aspects of the claimed embodiments. Support for the amended and newly added features can be found in the originally filed application, including Fig. 1. Accordingly, Applicant submits that no new matter is added to the application by this submission.

Claim 25

Among other features, amended claim 25 recites “a single molding compound without interfaces, encasing the semiconductor chip over the ball grid substrate.” (*Emphasis added*).

In page 3, the Final Office Action asserts that the McLellan reference teaches a molding compound 150 and an epoxy attaching material under an element 132 encasing the semiconductor chip over the ball grid substrate. Further, the Advisory Action alleges that a reasonable interpretation of the term “mounting compound” includes the structure taught by McLellan et al, and the claims are directed to a device and not to a method.

However, Applicant respectfully submits that McLellan et al does not teach or disclose a single molding compound without interfaces, as recited in claim 25. In fact, as recited in Figs. 4B, 4E (see FIG. 4E – reproduced below), and lines 42~49 of column 3 of the McLellan reference, there are two separate parts including the glob-top material 150 and the epoxy attaching material under the element 132 and interfaces therebetween, since the above materials are formed by two separate fabrication steps including dispensing the glob-top material 150 on the top surface of the substrate 122 and using the epoxy attaching material for bonding the semiconductor die and the silicon adapter.



(McLellan reference-FIG. 4E)

In contrast, the molding compound, as recited in amended claim 25 (and as illustrated in FIG. 2A – reproduced below), is a single molding compound and has no interfaces.

(single molding compound)

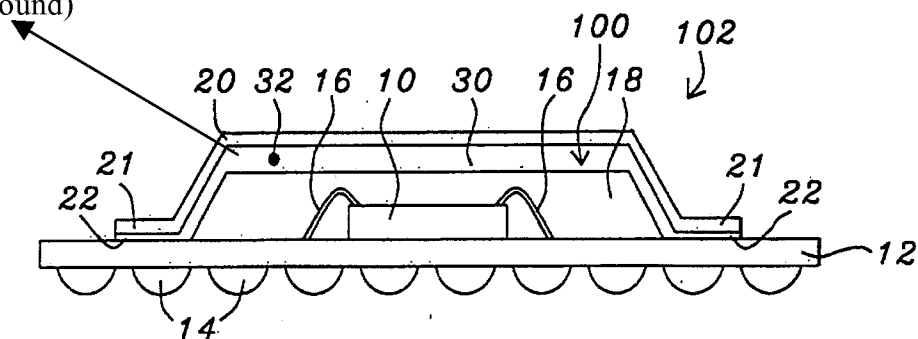


FIG. 2A

For at least the foregoing reasons, Applicant respectfully submits that claim 25 is in condition for allowance. Applicant respectfully asserts that the recited references, either individually or in combination, are legally deficient for the purpose of rendering claim 25 obvious. Specifically, Applicant respectfully asserts that neither *McLellan* nor *Khatri* teaches or reasonably suggests at least the feature/limitations emphasized above in claim 25 (e.g., the feature of “a single molding compound without interfaces, encasing the semiconductor chip over the ball grid substrate”). As claims 26-29, 31-34, 36-37 and 63 are dependent claims that depend from claim 25, these claims patently define over the cited art for at least the same reasons.

Claim 41

Independent claim 41 embodies limitations similar to those discussed above in connection with claim 25. Accordingly, the rejection of claim 41 should be withdrawn for similar reasons.

For at least the reason, Applicant respectfully asserts that claim 41 is in condition for allowance. Applicant respectfully asserts that the recited references, either individually or in combination, are legally deficient for the purpose of rendering claim 41 obvious. Specifically, Applicant respectfully asserts that neither *McLellan* nor *Khatiri* teaches or reasonably suggests at least the features/limitations emphasized above in claim 41. Since claims 42-45, 47-50, 52-53 and 64 are dependent claims that depend from claim 41, these claims patently define over the cited art for at least the same reasons.

Therefore, Applicants respectfully submit that the rejection can be withdrawn and requests that a timely Notice of Allowance be issued in this case.

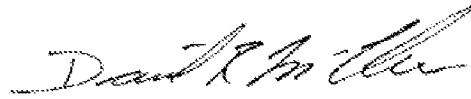
NO EXTENSION OF TIME REQUIRED

The Advisory Action re-set the shortened statutory period for reply to 5 months from the mailing date of the FINAL Office Action, or August 20, 2006. As Applicant has already petitioned for, and paid for, a two-month extension, it is believe that no further extension is required. If, however, any additional extension is required, Application hereby petitions for such extension, to and including September 20, 2006. Any payment required may be charged to deposit account 20-0778.

A credit card authorization has been provided to cover the fee associated with the accompanying RCE. If any additional fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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